

# **MATHEMATICS**

## **Second Grade**

### **NUMBER AND OPERATIONS**

*The student will identify, represent, order, and compare numbers and compute and solve problems.*

Key	Reporting Category		PLT Activity
D		Count a set of objects to 100 by 2's, 3's, 5's, or 10's.	
D		Count forward and backward by one from any number less than 999.	
D		Read and write numerals to 999.	
D		Identify the place value of a digit in numbers to 999.	
D		Identify odd and even numbers to 100.	
I		Use concrete models or pictures to show whether a fraction is less than $\frac{1}{2}$ , more than $\frac{1}{2}$ , or equal to $\frac{1}{2}$ .	
D		Match the spoken or written word names and concrete or pictorial representations (parts of regions or parts of sets of objects) of halves, thirds, and fourths.	
I		Compare the unit fractions $\frac{1}{2}$ , $\frac{1}{3}$ , and $\frac{1}{4}$ .	
D		Determine the value of a collection of coins up to \$1.00.	
D		Order and sequence whole numbers less than 1000.	
D		Compare two numbers using the appropriate symbol (i.e., $<$ , $>$ , and $=$ ).	
D		Represent numbers to 999 in flexible ways using a variety of materials (e.g., 23 as 23 ones, 1 ten and 13 ones, and/or 2 tens and 3 ones).	
D		Use and match numerals to ordinal numbers through twentieth.	
D		Develop a story problem that illustrates a given addition or subtraction number sentence.	
I		Use the number line to demonstrate addition and subtraction.	
I		Write and identify number sentences that describe situations involving addition and subtraction.	
I		Write and explain related addition and subtraction sentences.	
D		Solve story problems involving numbers to 100.	
D		Check for the reasonableness of solutions.	
D		Use calculators in problem-solving situations.	
D		Add and subtract efficiently and accurately with single-digit numbers up to sums of 18.	
D		Add and subtract two-digit whole numbers using a variety of strategies and representations.	
D		Explain and justify solution strategies used in problem solving.	
D		Use estimation to justify whether the answer to a computation is reasonable.	

### **ALGEBRA**

*The student will sort and classify objects; create, extend, and describe patterns; and represent number sentences with words, objects, and pictures.*

#### **KEY**

**I = Introduced D = Developing A = State Assessed M = Mastered**

#### **REPORTING CATEGORY**

**N = Number & Operations AT = Algebraic Thinking C = Computation R = Real World Problem Solving**  
**DP = Data Analysis & Probability ME = Measurement G = Geometry GR = Graphs & Graphing**

**NOTE: "A" Indicates the state curriculum (CRT) assessment only.**

**All the skills ("I" ... "D" ... "A" ... "M") are addressed in classroom assessment.**

<b>D</b>		Sort objects by two or more attributes.	21 Adopt A Tree p. 97
<b>D</b>		Identify the rules by which objects or numbers have been sorted.	
<b>D</b>		Extend a growing pattern, involving objects, shapes, or numbers.	
<b>D</b>		Identify the unit of a three-part repeating pattern.	
<b>D</b>		Translate a repeating pattern from one format to another (e.g., red-blue-blue to snap-clap-clap).	
<b>I</b>		Determine the output number for a particular input number given a one-operation rule involving addition or subtraction.	
<b>D</b>		Interpret and solve open sentences that involve addition or subtraction.	
<b>D</b>		Communicate and use mathematical terms and symbols appropriately.	
<b>D</b>		Show or represent number sentences, involving addition and subtraction and numbers 0-20, with concrete objects.	
<b>D</b>		Demonstrate knowledge of and use the commutative property of addition.	
<b>I</b>		Show that subtraction is not commutative.	
<b>D</b>		Apply the addition and subtraction properties of 0 (adding or subtracting 0 doesn't change a given number).	
<b>I</b>		Describe qualitative change (e.g., a student growing taller).	
<b>I</b>		Describe quantitative change (e.g., a student growing 2 inches in 1 year).	

## GEOMETRY

*The student will identify, describe, and create basic shapes and describe relative positions and directions.*

<b>D</b>		Identify, build, draw, and compare two- and three-dimensional geometric figures.	
<b>D</b>		Describe characteristics and parts of two- and three-dimensional geometric figures.	
<b>I</b>		Identify shapes that have line symmetry.	
<b>D</b>		Investigate and predict the results of combining and taking apart two- and three-dimensional geometric figures.	
<b>M</b>		Identify the position of a whole number on the number line.	
<b>I</b>		Illustrate flips, slides, and turns using concrete objects and pictures.	

## MEASUREMENT

*The student will apply measurement concepts of time, length, weight, capacity, and temperature.*

<b>D</b>		Compare and order objects according to length, capacity, and weight.	
<b>I</b>		Demonstrate understanding of the concepts of perimeter and area.	
<b>I</b>		Identify what can be measured about objects in the environment.	
<b>D</b>		Identify time to the hour, half-hour, and quarter-hour.	
<b>D</b>		Relate days, dates, weeks, and months to a calendar.	
<b>D</b>		Explain the relationship between inches and feet.	
<b>D</b>		Measure length to the nearest centimeter, foot, half-inch, and inch.	

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<b>I</b>		Estimate lengths and time intervals.	
<b>I</b>		Solve problems involving elapsed time in hours.	
<b>I</b>		Measure and estimate weight and capacity using a variety of nonstandard units.	
<b>I</b>		Find area and perimeter using nonstandard units.	
<b>D</b>		Read thermometers with Fahrenheit and Celsius scales.	

#### DATA ANALYSIS AND PROBABILITY

*The student will make simple graphs using concrete objects and pictures and describe events as likely or unlikely.*

<b>I</b>		Pose questions and gather data to answer the questions.	25 Birds and Worms p. 111 27 Every Tree for Itself p. 117
<b>I</b>		Read, interpret, and construct tables using tally marks.	
<b>D</b>		Construct pictographs and bar graphs.	25 Birds and Worms p. 111
<b>D</b>		Interpret and solve problems with tables, bar graphs, and pictographs.	25 Birds and Worms p. 111
<b>I</b>		Predict outcomes of events based on data gathered and displayed.	
<b>M</b>		Explain whether an event is likely or unlikely.	

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